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Venture Capital Markets: A Cross Country Analysis

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Abstract

Venture capital (VC) may be defined as a support to entrepreneurial talents and appetite by turning ideas and basic science into products and services which are expected to envy the world. Venture capital funds are able to build companies from the simplest form to mature organizations. Venture capital investors generally actively engage with management of the company by typically taking place on the board. Through the due diligence process the venture capital firms concentrate on the founders, the management team, the concept, the marketplace, the revenue model, the value-added potential of the firm, the amount of capital needed to heal the business and whether all these fit to the fund's objectives. Over the next three to eight years, the venture firm works with the founding entrepreneur/s to grow the company. Once a company funded by venture capital matures and becomes successful, venture funds generally exit by taking it public through an initial public offering (IPO) or by selling it to big companies. This allows the venture funds to be free from the previous investment and invest in the next generation of companies. United States, Europe, Israel, Canada, China and India have the most developed markets for venture capital environment. The size of the venture capital market is nowadays about $50 billion and the United States has the most funds for venture capital of $33.1 billion in 2013. Venture capital firms may invest in promising firms in stages of seed, first round, second round or later. The median investment amounts in the United States in 2013 are $0.5 million for seed, $2.5 million for first round, $5.7 million for second round and $10 for later stage. The most attractive sector for venture capital is information technology for the United States, Israel and Canada, invested over $10 billion in 2013, while the most attractive sector is consumer products for Europe, China and India, invested over $4.8 billion in 2013.

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1. Introduction

Venture capital (VC) may be defined as a support to entrepreneurial talents and appetite by turning ideas and basic science into products and services which are expected to envy the world. Venture capital funds are able to build companies from the simplest form to mature organizations. The start-ups are generally composed of entrepreneurs and an idea expressed as a business plan. Venture capital firms are professional managers of risk capital that enables and supports the most innovative and promising companies. Venture capital funds new, promising and innovative ideas that may not be possibly financed by the ways of traditional banking. Venture capital is in fact a unique investment for institutional investors. When a venture capital investment is made in a company, it is an investment for a proportion of the equity in which the stocks are essentially illiquid and worthless until the company matures three to eight years and turns out to be a significant value. Later on the way the venture investors provide additional funding as the company needs cash injection to grow further. These are called rounds and typically occur every other year or two and also may involve additional equity investments by allocating shares among the investors and management team based on an agreed new valuation of the company. Nevertheless, venture capital is a long-term and risky investment which may have very little or no value unless the company is acquired or goes public.

In the period of 1991 and 2014, a total of 11,686 companies funded by venture capital in the United States over time in which 14% went public, 33% acquired, 35% still private and 18% failed. The most attractive sectors for US venture funds are software (41%), biotechnology (12%), media & entertainment (12%), IT services (7%), media devices (5%) and industrial energy (5%). New commitments to VC funds in the USA are $17.7 billion in 2013 and around $30 billion in 2014.

2. How a Venture Capital System Works

Entrepreneurship has been recognized as a major conduit for sustainable products and processes, and new ventures are viewed as an answer to many social and environmental problems (Hall et al., 2010 and Pacheco et al., 2010). Venture capital has a key role in nurturing entrepreneurship and new ventures. As such, venture capital may be viewed as an important catalyst to develop sustainable businesses (Bürer and Wüstenhagen, 2008) – those that contribute positively to the environment and society while generating a profit.

Venture capitalists are keys in the emergence of businesses. They can make start-ups grow faster, create more value and generate more employment and innovation (Keuschnigg, 2004). Venture capitalists may be viewed as the “gate keeper” to the emergence of new businesses, as their role is to select venture ideas presented to them by entrepreneurs (Marcus et al., 2013).

Actually, venture capitalists involve more than putting money into a risky business. Venture capital investors in general actively engage with management of the company by typically taking place on the board. Through the due diligence process the venture capital firms concentrate on the founders, the management team, the concept, the marketplace, the revenue model, the value-added potential of the firm, the amount of capital needed to heal the business and whether all these fit to the fund’s objectives. Over the next three to eight years, the venture firm works with the founding entrepreneur/s to grow the company. The expected payoff comes only after the company is acquired or goes public. Although the venture capital investors have high hopes for all companies funded, statistically only one company in six ever goes public and one company in three is acquired. The most expensive asset for venture capital firms is time. Therefore, a business approaching venture capital firms should have a concept addressing world markets, superb scalability, expected to be successful in a reasonable timeframe, and be truly innovative filling a gap. A business concept promising a 10 or 20% improvement on returns is not likely to grab the attention of venture capital firms.

The success of venture capital is mostly embedded in the entrepreneurial spirit pervasive in the culture, financial recognition of success, access to advance science, and fair and open capital markets. Motivated entrepreneurs, protection of intellectual property, availability of a skilled workforce and existence of an environment for a good flow of science are the requirements of venture capitalists. A country’s cultural look over entrepreneurships, tolerance for failure, services infrastructure, intellectual property protection, efficient capital markets, and the willingness of big business to purchase small and grown up companies invite venture funds from other countries or encourage new funds to be formed. Once a company funded by venture capital matures and becomes successful, venture funds generally exit by taking it public through an initial public offering (IPO) or by selling it to big companies. This allows the venture funds to be free from the previous investment and invest in the next generation of companies.

3. Cross Country Aspect of Venture Capital

VC funds generally accumulate in Western countries where GDP is high and advancements/innovations are encouraged and supported. Table 1 exhibits global annual venture capital investments for the period of 2006 and 2013. The total amount of VC funds has reached to $48.5 billion in 2013 from $42.7 billion in 2006. Almost two third of the funds is provided by angel investors in the US. The European VC funds exceed $7 billion while the Chinese VC funds are amounted $3.3 billion in 2013. The VC funds globally decreased in 2009 and 2010, representing the effects of the recent crisis. Israel appears to be one of the global players financing start-ups with $1.7 billion in 2013, almost double the amount invested in Canada.

Table 1. Global Annual Venture Capital Investments (bil$)

Country	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
USA	31.1	34.3	33.3	24.5	29.3	36.2	32.8	33.1
Europe	6.3	7.6	7.8	5.7	7.1	7.3	6.2	7.4
Israel	1.5	1.9	2.2	0.9	1.9	1.9	1.1	1.7
Canada	0.7	1.0	0.8	0.5	1.0	1.2	0.9	1.0
China	2.5	3.9	5.0	2.8	6.1	6.5	5.0	3.5
India	0.6	0.9	1.8	0.8	0.9	1.5	1.6	1.8
Total $	**42.7**	**49.6**	**50.9**	**35.2**	**46.3**	**54.6**	**47.6**	**48.5**
Total Rounds	**4991**	**5805**	**5435**	**4748**	**5349**	**5820**	**5741**	**5753**

Table 2. VC Investments by Sectors in the USA (2014)

Industry Groups	**All Investments**			**Initial Investments**		
	#of Groups	**# of Deals**	**Investment (bil$)**	**#of Groups**	**# of Deals**	**Investment (bil$)**
Info. Tech.	2611	3050	35.7	1059	1059	5.2
Medical/Life Sciences	650	827	8.8	174	174	1.1
Non-High Tech	404	484	4.8	177	177	0.9
Total	**3665**	**4361**	**49.3**	**1410**	**1410**	**7.2**

Table 2 presents the VC investments by sectors in the US in 2014. Information technology is the most attractive sector for the angel investors. 3050 deals out of 4361 received investment in the amount of $35.7 billion. The second attractive sector is the medical/life sciences closing 827 deals with an investment amount of $8.8 billion.

Table 3. VC Investment by Countries (2013)

Region	**Invested Capital (bil$)**	**Invested Rounds**	**% Change Amount Invested**	**% Change in Deals**	**% Change Global VC Activity**
USA	33.1	3480	0.9	-4.6	68.2
Europe	7.4	1395	19.4	5.7	15.3
Canada	1.0	176	14.4	23	2.1
China	3.5	314	-30	20.3	7.2
India	1.8	222	12.5	-2.2	3.7
Israel	1.7	166	54.5	17.7	3.5
Total	**48.5**	**5753**	**71.7**	**59.9**	**100**

Table 3 shows the dispersion of VC funds over countries in 2013. The total funds has globally reached to $48.5 billion. India and Israel have also become a international player in angel investor market. The statistics indicate that international venture capital behaviour varies over countries. The amount of invested capital, invested rounds, median round size and median time to exit the business may be considered the fundamental parameters to compare the aspects of international VC. The number of rounds indicates how many times a business raises funds via venture capital. This actually represents the depth of the market. The invested rounds in the US, Europe, China and India are 3480, 1395, 314 and 222, respectively. The median round size is $4.20 million in the US, $1.98 million in Europe, $7 million in China and $4 million in India. Venture capitalists eventually expect to liquidate its investment by selling the shares to a portfolio company and exit the business. The average time to exit is three to seven years through an initial public offering (IPO). The median time to exit in the US is 6.8 years while 6.3 years in Europe and 3.9 years in China. The funded businesses may alternatively be acquired or merged. The median time to M&A is 5 years in the US, 6.3 years in Europe, 3.5 years in China and 2.6 years in India.

Table 4. Key Factors for Trends: (exhibits median million dollars by round class in 2013)

VC TRENDS	Country	2010	2011	2012	2013
Invested Capital (bil$)	USA	29.2	36.2	32.8	33.1
	Europe	7.1	7.3	6.2	7.4
	Israel	1.9	1.9	1.1	1.7
	China	6.1	6.5	5	3.5
	India	0.9	1.5	1.6	1.8
Invested Rounds	USA	3161	3600	3649	3480
	Europe	1411	1322	1320	1395
	Israel	160	173	141	166
	China	388	404	261	314
	India	116	180	227	222
Median Round Size (mil$)	USA	4.16	4.86	4.12	4.2
	Europe	2.45	2.14	1.96	1.98
	Israel	4.6	5	3,5	4,43
	China	7.47	10	8	7
	India	7.25	5.15	3.97	4
Number of VC-Backed IPOs	USA	47	46	50	74
	Europe	18	15	16	15
	Israel	2	2	0	2
	China	141	99	46	15
	India	6	2	2	1
$ Raised (bil$)	USA	3.2	5.3	11.2	8.2
	Europe	0.6	1	0.5	0.6
	Israel	0.4	0.2	NS	0.6
	China	22	15.6	4.4	2
	India	6	2	2	1
Median Time to Exit	USA	8	6.4	7.4	6.8
	Europe	3.8	9.2	6,2	6.3
	Israel	NS	NS	NS	NS
	China	2.6	2.5	2.4	3.9
	India	4.3	NS	NS	NS
Number of VC-Backed M&As	USA	593	562	490	436
	Europe	217	216	162	157
	Israel	19	18	19	10
	China	18	11	11	20
	India	16	6	16	13
Median M&A Valuations (mil$)	USA	37.8	60	60	57.5
	Europe	23	40.5	26.7	63.8
	Israel	35	30	24.9	1431
	China	61.4	80	33	87.5
	India	27	NS	18.4	46.5
Median Time to M&A (years)	USA	5.3	5.3	5.2	5
	Europe	5.7	5.5	5.9	6.3
	Israel	9.7	6.7	7.5	5.9
	China	3.8	4.1	4.4	3.5
	India	3.5	4.1	4	2.6

Table 5. Median $ by Round Class 2013 (median time from initial VC to IPO exit -years).

Country	Seed	1st Round	2nd Round	Later Stage
USA	0.5	2.5	5.7	10.0
Europe	0.3	1.3	3.3	6.7
China	0.4	4.0	10.0	20.0
Canada	0.1	1.6	5.3	5.0
Israel	0.7	2.6	9.5	8.1
India	0.2	1.5	6.0	10.0
Total	**2.2**	**13.5**	**39.8**	**59.8**

Table 6. Average Time to Exit and Average $ Raised Prior to IPO

	Country	2007	2008	2009	2010	2011	2012	2013
Average time from initial VC to IPO exit (years)	USA	6.8	8.7	7.9	8.0	6.4	7.3	6.8
	Europe	6.4	8.1	N/A	3.8	9.2	6.2	6.3
	China	1.8	3.8	2.3	2.6	2.5	2.4	3.9
Average $ raised prior to IPO (mil$)	USA	64.4	48.6	42.5	72.1	82.8	78.4	100.9
	Europe	7.2	3.0	N/A	21.5	22.4	23.9	26.4
	China	18.2	3.7	5.0	6.9	5.9	7.4	46.1

Table 7. Investment by Stage of Development (mil$-2013)

Country	Start up	Product Development	Revenue Recognition	Profitable
USA	0.8	2.9	4.8	5.6
Europe	0.3	1.5	2.0	3.3
China	0.0	2.0	7.7	10.0
Canada	0.0	1.1	2.3	6.2
Israel	0.0	4.5	6.4	8.0
India	0.0	2.0	4.0	45.8

Table 8. Exit Environment for VC Investments

Global VC - Backed IPOs	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
bil$ Raised	12.1	1.4	5.5	26.3	21.9	16.1	11.0
# of IPOs	163	32	58	214	164	114	108
Global VC - Backed M&A	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
mil$ -Medial Deal	183.6	108.8	102.9	184.1	210.5	162.9	398.3
# of Transactions	899	734	671	864	813	698	636

4. Conclusion

Entrepreneurship has been recognized as a major conduit for sustainable products and processes, and new ventures are viewed as an answer to many social and environmental problems. Venture capital has a key role in nurturing entrepreneurship and new ventures. Venture capital may be defined as a support to entrepreneurial talents and appetite by turning ideas and basic science into products and services which are expected to envy the world. The success of venture capital is mostly embedded in the entrepreneurial spirit pervasive in the culture, financial recognition of success, access to advance science, and fair and open capital markets.

United States, Europe, Israel, Canada, China and India have the most developed markets for venture capital environment. The size of the venture capital market is nowadays about $50 billion and the United States has the most funds for venture capital of $33.1 billion in 2013. Venture capital firms may invest in promising firms in stages of seed, first round, second round or later. The median investment amounts in the United States in 2013 are $0.5 million for seed, $2.5 million for first round, $5.7 million for second round and $10 for later stage. The most attractive sector for venture capital is information technology for the United States, Israel and Canada, invested over $10 billion in 2013, while the most attractive sector is consumer products for Europe, China and India, invested over $4.8 billion in 2013.

The statistics indicate that international venture capital behaviour varies over countries. The analysis shows that the US is the leader country in venture capital investments with a total amount of $33.1 billion in 2013. The median round size is $4.20 million in the US, $1.98 million in Europe, $7 million in China and $4 million in India. The median time to exit in the US is 6.8 years while 6.3 years in Europe and 3.9 years in China. Moreover, the median time to M&A is 5 years in the US, 6.3 years in Europe, 3.5 years in China and 2.6 years in India.

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